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COMMONWEALTH OF AUSTRALIA

"Patents Act 1952-1969"

501,652

COMPLETE AFTER PROVISIONAL SPECIFICATION NO. 18709/76
APPLICATION FOR A PATENT

(a) Name of applicant

ROVER MOWERS (AUST.) PTY. LTD.,

18709/76

(b) Street address of applicant

of (b) 155 Fison Avenue, Eagle Farm, Brisbane, Queensland,
4007, Commonwealth of Australia

(c) Nature of invention

hereby apply for the grant of a Patent for an invention entitled (c) A BLADE ASSEMBLY

which is described in the accompanying ~~provisional~~ ~~specification~~ specification.

Our address for service is: C/o Arthur S. Cave & Co., Patent Attorneys, 1 Alfred Street, Sydney,
2000, in the State of New South Wales, Commonwealth of Australia.

DATED this 30th day of OCTOBER, 1975

RECEIVED

Date 3/11/76

Receipt—

PC 3810

Application ✓

Declaration ✓

Specification 376

Drawings

ROVER MOWERS (AUST.) PTY. LTD.

By Their Patent Attorneys,

ARTHUR S. CAVE & CO.,

G. F. Chodziesn

AUSTRALIAN

23 NOV 1975

PATENT OFFICE

APPLICATION ACCEPTED AND AMENDMENTS
ALLOWED 10/5/79Fee Stamps to value of \$3
attached.

Mail Officer.....

DECLARATION IN SUPPORT OF AN APPLICATION FOR A PATENT OR
PATENT OF ADDITION(a) Insert full
names of
applicants.

In support of the Application made by (a) ROVER MOWERS (AUST.) PTY. LTD.

for a patent ~~XXXXXX~~ for an invention entitled: - (b)(b) Insert title
of invention

A BLADE ASSEMBLY

18709/76

(c) Insert full
name(s) of
declarant(s).

I, (c) GEORG FRIEDRICH CHODZIESNER, Patent Attorney,

(d) Insert
address(es)
of declarant(s).

of (d) 1 Alfred Street, Sydney, New South Wales, 2000,

do solemnly and sincerely declare as follows:-

~~I am the applicant for the patent~~
patent of addition~~(If in the case of an application by a body corporate.)~~(e) Insert name
of body
corporate.

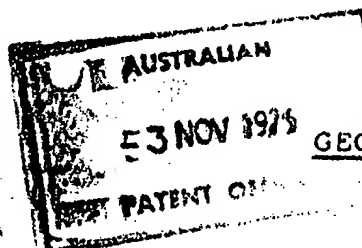
1. I am authorized by (e) ROVER MOWERS (AUST.) PTY. LTD.

the applicant for the patent
patent of addition to make this declaration on its behalf.~~2. I am the actual inventor of the invention.~~~~(If, where a person other than the inventor is the applicant.)~~(f) Insert full
name(s) of
actual
inventor(s).

2. (f) DOUGLAS FLINDERS GREEN,

(g) Insert
address(es) of
actual
inventor(s).of (g) 155 Fison Avenue, Eagle Farm, Brisbane, Queensland, 4007,
Commonwealth of Australiais the actual inventor of the invention and the facts upon which ~~XXXX~~ the Company
is entitled to make the application are as follows: - (h) The company is the assignee
of the said invention from the said inventor

Declared at SYDNEY, this 30th day of OCTOBER, 1975

(h) Set out how
applicant(s) derive(s) title
from actual
inventor(s)
i.e. assignee of
the invention
from the actual
inventor(s).To:
The Commissioner of Patents,
COMMONWEALTH OF AUSTRALIAARTHUR S. CAVE & CO.
PATENT AND TRADE MARK ATTORNEYS
SYDNEY

GEORG FRIEDRICH CHODZIESNER.

(Signature of Declarant)



(11) AU-B 18709/76

(12) PATENT SPECIFICATION
ABRIDGEMENT
(19) AU

(21)	18709/76	501,652	(22)	3.11.75
(23)	14.10.76		(24)	3.11.75
(43)	20.4.78		(44)	28.6.79
(51) ²	A01D 55/18	A01D 35/26		
(54)	MOWER BLADE ASSEMBLY			
(71)	ROVER MOWERS (AUST.) PTY. LTD.			
(72)	GREEN, D.F.			
(74)	CA			
(56)	37228/71	32.21		
	36901/68	32.21		
	9399/66	427123	32.21	32.3

(57) CLAIM 1. A blade assembly comprising a flanged bearing sleeve, a plurality of blades removably mounted on said sleeve between said flange and a clamping plate removably mounted on said sleeve at the end of the sleeve remote from said flange, the blades projecting perpendicular to the sleeve and being spaced from each other by collars positioned between each blade, said blades being secured to said flange by first studs passing through the clamping plate, blades, collars and flange, said blades being additionally secured together by studs which do not pass through the clamping plate or flange and said sleeve incorporating means whereby the assembly is attached to a power output shaft.

AUSTRALIA

Form 10

PATENTS ACT 1952-1973

COMPLETE SPECIFICATION

(ORIGINAL)

FOR OFFICE USE

1870978

Application Number:
Lodged:

Class

Int. Class

Complete Specification Lodged:
Accepted:
Published:

This document contains the
amendments made under
Section 49.

Priority:

Related Art:

and is correct for printing.
8 JUN 1979

TO BE COMPLETED BY APPLICANT

501,652

Name of Applicant: ROVER MOWERS (AUST.) PTY. LTD.

Address of Applicant: 155 Fison Avenue, Eagle Farm, Brisbane,
Queensland, 4007, Commonwealth of Australia.

Actual Inventor: DOUGLAS FLINDERS GREEN

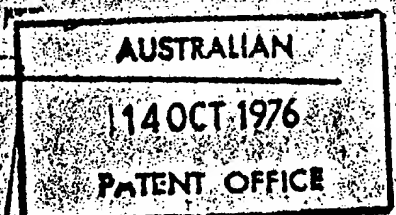
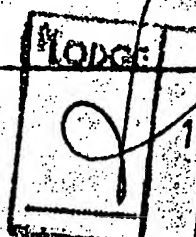
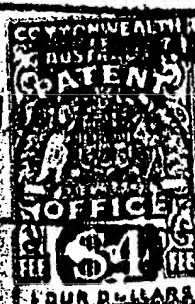
Address for Service: ARTHUR S. CAVE & CO., 1 Alfred Street, Sydney,
N.S.W. 2000 Australia

Complete Specification for the invention entitled

"A Blade Assembly"

SEE STAMPS TO VALUE OF 25
ATTACHED.
MAIL OFFICER

The following statement is a full description of this invention,
including the best method of performing it known to me:-



501,652

The present invention relates to a blade assembly and more particularly to a blade assembly for use with shredding machines of the type described in our co-pending application for Patent No. 19127/76.

5 It is to be clearly understood however that the blade assembly is not limited to such a machine and the blade assembly of the invention finds application in conventional grass-cutting machines and the like.

10 Material fed to shredding machines is frequently bulky and hard. In consequence the blades of such machines are subjected to very high impact loads with consequent high rate of wear.

15 Because of such factors, the blade assemblies used must be of robust construction and must be so constructed that the assembly can be easily and quickly dismantled and taken apart for the repair and replacement of worn parts.

20 The object of the present invention is to provide a blade assembly which fulfils the aforementioned requirements and which is easily and simply made of inexpensive materials.

25 A blade assembly comprising a flanged bearing sleeve, a plurality of blades removably mounted on said sleeve between said flange and a clamping plate removably mounted on said sleeve at the end of the sleeve remote from said flange, the blades projecting perpendicular to the sleeve and being spaced from each other by collars positioned between each blade, said blades being secured to said

flange by first studs passing through the clamping plate, blades, collars and flange, said blades being additionally secured together by studs which do not pass through the clamping plate or flange and said sleeve incorporating means whereby the assembly is attached to a power output shaft.

The invention will now be described with reference to one embodiment thereof in which

FIG. 1 is a side view of the blade assembly;

FIG. 2 is a plan view of the assembly on line 2-2 of FIG. 1;

FIG. 3 is a sectional view on line 3-3 of FIG. 1 and, FIG. 4 is a sectional view on line 4-4 of FIG. 1.

5 Referring now to the drawings, the blade assembly comprises a flanged bearing sleeve designated generally by the reference 1 consisting of a sleeve 2 and a rectangular plate 3, the plate is provided with a bore 4, the sleeve 3 passes through the bore 4 and is secured to the sleeve as by welding. The sleeve is provided with an axial bore 5 which includes a keyway 5a whereby the sleeve is fixed to the output shaft (not shown) by a key (not shown) engaging in a corresponding keyway (not shown) in a motor output shaft. The plate 3 is provided with diametrically opposed holes 6 on either side of the bore 4.

A blade arrangement comprising three blades, spacer members, a clamping plate and securing studs is mounted on the sleeve 1 in the manner hereafter described. Each blade 7 is provided with a central bore 8 slightly in larger diameter than the diameter of sleeve 2 and in addition has two diametrically opposed holes 9 and 10 on each side of the bore 8. When the blades are mounted on the sleeve 2 the holes 9 register with the holes 6, and the holes 10 on each side of the bore 8 are also in register.

25 The blades are mounted on the sleeve 2 and separated from each other by spacer collars 11 and 12. The blade assembly just described is secured to the flanged sleeve 1

by a clamping plate 13 provided with central bore 14 and holes 15 are located on either side of the bore 14 register with holes 9.

Studs 16 pass through the holes 15, 9 and 6 and the collars 12 secured in position by nuts 17 screwed to the threaded ends thereof. Additional studs 18 passing through the holes 10 and collar 11 are secured by nuts 19 screwed on to the threaded ends thereof.

A stud 20 passing through the bore 5 and collar 21 is screwed into a bore in the motor output shaft (not shown) to secure the blade assembly to the mower output shaft.

The opposed edges of the blades 7 are provided with cutting edges as at 22 to facilitate the cutting of material fed to the blades.

Although the invention has been described with reference to a blade assembly incorporating three blades it will be appreciated that other numbers of blades may be used and assembled in the manner as already described.

It will be apparent that the assembly just described provides a simple, inexpensive, efficient and reliable blade assembly which achieves the objects of the present invention.

The Claims defining the invention are as follows:

1. A blade assembly comprising a flanged bearing sleeve, a plurality of blades removably mounted on said sleeve between said flange and a clamping plate removably mounted on said sleeve at the end of the sleeve remote from said flange, the blades projecting perpendicular to the sleeve and being spaced from each other by collars positioned between each blade, said blades being secured to said flange by first studs passing through the clamping plate, blades, collars and flange, said blades being additionally secured together by studs which do not pass through the clamping plate or flange and said sleeve incorporating means whereby the assembly is attached to a power output shaft.
2. A blade assembly substantially as hereinbefore described with reference to the accompanying drawings.

DATED this 13th day of October, 1976.

ROVER MOWERS (AUST.) PTY. LTD.,

By Its Patent Attorneys

ARTHUR S. CAVE & CO.

1870976



1870976

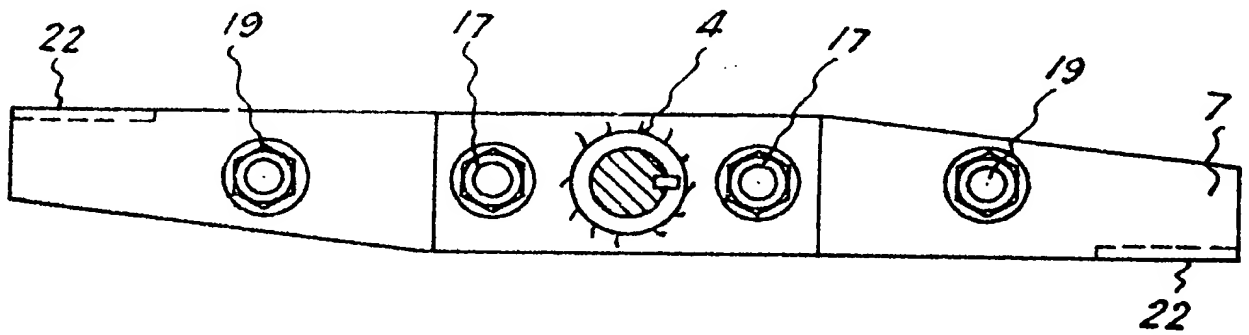
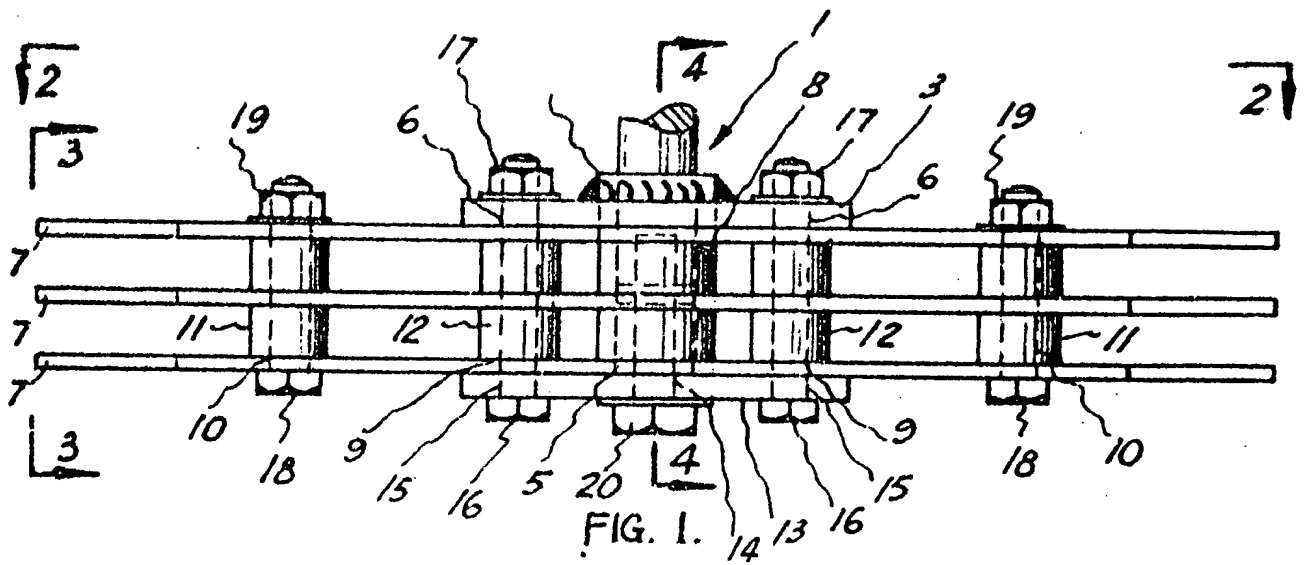


FIG. 2.

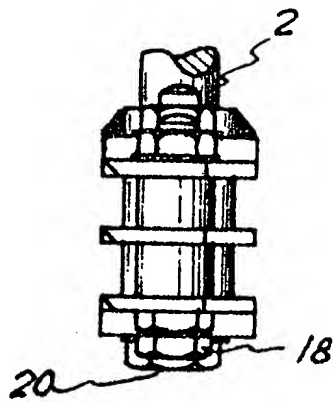


FIG. 3.

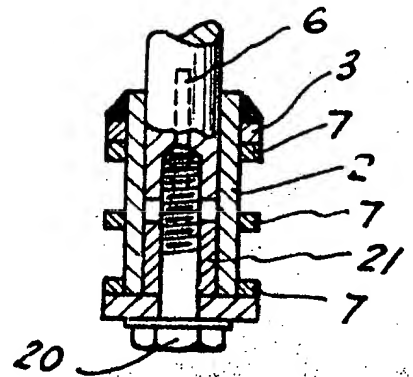


FIG. 4.